

REMARKS/ARGUMENTS

The Examiner is thanked for his review of the application.

Claims 1-6, 9-11, and 14-19 remain in this application. Claims 1-6, 9-11, 19 have been amended. Claims 25-28 have been added. No new matter has been added.

In the Office Action dated April 11, 2006, the Examiner has rejected Claims 1-6, 9-11 under 35 USC 101 because the claimed invention is directed to non-statutory subject matter. Regarding this rejection the Examiner has stated that “the examiner believes the claims are directed to non-statutory subject matter because the claims are directed to **‘a storage media’ that can be a ‘data signal embodied in a carrier wave’** (i.e. a data signal). See page 4 of the instant specification where this is specifically disclosed. A signal does not fall into any one of the allowable statutory classes of invention. A signal is not an apparatus or an article of manufacture because a signal is not a real world tangible thing. A signal is not a method because a signal itself does not do anything. There is no statutory class of invention that a signal claim would fall into. The claims are directed to non-statutory subject matter for this reason.” (Emphasis added).

Claim 1 has been amended to include **“A price optimization system . . . comprising: a rule prioritizer. . . a rule relaxation module . . . a database . . . and an optimization engine.”** (Emphasis added). Support can be found in page 7, lines 10-21, page 8, lines 3-19, page 21, lines 7-12 and figures 1, 7 in the specification as filed. As such, applicant respectfully traverses the rejection.

The claimed apparatus is a tangible and physical “price optimization system” and is therefore a real world tangible thing. Applicants believe the amended claim satisfies the statutory class of an invention under 35 USC 101. As such, the system as recited in Claim 1 is now directed at statutory subject matter.

Furthermore, the present invention provides a practical application by producing a Useful, Concrete and Tangible result. Useful result is defined by the present invention’s Utility, namely specific, substantial, and credible. (MPEP 2107). The claimed result is the generation of a “preferred set of prices for a subset of a plurality of products”, utilizing rule relaxation. As such the applicant respectfully submits that the specific prong of Useful is met. The generation of optimized prices for a business’ products will lead to the success or failure of a business. As such the

applicants respectfully submit that the substantial prong of Useful is met. The generation of preferred prices as specific and substantial is supported by the specification as filed, thereby satisfying the credibility prong of Useful. See page 1, lines 20-26, page 2, lines 1-16 and page 3, lines 3-14 of the specification as filed.

The generation of preferred prices is itself tangible, and additionally the alteration of product pricing and advertising in stores, which flows inherently therefrom, all describe tangible real-world results. As such the applicant respectfully submits that the generation of preferred prices produces a Tangible result.

The generation of preferred prices with the exact same data input will infallibly result in the same generation of identical preferred prices. Likewise, varying data will infallibly result in a generation of varying preferred prices that are each optimal for the data provided to generate them. In such a computer implemented apparatus accuracy is assured. As such the applicant respectfully submits that the generation of preferred prices produces a Concrete result.

In the same Office Action the Examiner has rejected Claims 1-6, 9-11, 14-19 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particular point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 1, the Examiner has stated that "it is not clear what is being claimed. The preamble states that an apparatus is being claimed; however, there is nothing recited in the body of the claim about an apparatus or anything structural that could be considered to be an apparatus. It is not clear if the apparatus is the 'storage media' or if the apparatus has the storage medium as part of its structure (which means nothing about the apparatus has been claimed). What is the apparatus? The examiner does not see where any structure has been claimed that would constitute an apparatus. As the claim is best understood by the examiner, it appears that it is only directed to a 'storage media', and because this can be a data signal, the examiner questions what the 'apparatus' actually is. The scope of the claim is not clear and it is considered to be indefinite."

See the argument above for Claim 1 regarding the rejection under 35 U.S.C. 101 for why **"the price optimization system"** claimed is now in compliance with 35 U.S.C. 112, second paragraph. (Emphasis added). Thus, the rejection of claim 1 under 35 U.S.C. 112, second paragraph, is believed moot in light of the amended claims.

Regarding Claims 6, 11, 19 the Examiner has asked “what is ‘price bound data’ or ‘new bound data’? What does this refer to and what is the scope of this term? Data is data, what you call it may or may not mean anything and in this case it is not clear to the examiner what this means and what the scope of this term is.”

Claims 6, 11, 19 have all been amended to include “and further wherein new price bound data includes changes in costs, base price, competitive prices, point-of-sale data, product information and store information,” and is now in compliance with 35 U.S.C. 112, second paragraph. Support can be found in page 8, lines 10-17, page 28, lines 5-11 of the Specifications as filed. Thus, the rejection of claims 6, 11, 19 under 35 U.S.C. 112, second paragraph, is believed moot in light of the amended claims.

The Examiner has also rejected Claims 1-6, 9-11, 14-19 under 35 U.S.C. 102(b) as being anticipated by Reuhl et al. (5873069).

Regarding Claims 1, 14, the Examiner has stated that **“Reuhl discloses a method and system where sales and price data is entered into a computer system and the system then ‘optimizes’ the prices of numerous products based on the inputted sales data. The software has criteria (rules) for figuring out the final pricing of the products. The rules include looking for sales prices, advertised prices, etc., as well as applying a cent code to the resulting lowest price, and then checking to ensure that the new active price with the cent code is not greater than the competitor price. If the new price with the cent code results in the price being higher than the competitor price, then a new active price is calculated by incrementally relaxing the cent code rule. If the calculated price for a given item(s) is \$4.53, and the cent code rule requires the item to end in a 9, the price is changed to 4.59 in accordance with the cent code rules. Then the system compares the price of \$4.59 to the competitor’s price to ensure that a higher priority rule (lowest price) is feasible. If \$4.59 is not the lowest price, 10 cents is subtracted to arrive at a new price, which is \$4.49 (relaxing the cent code rule that stated the price should end in 9, namely from \$4.53 to \$4.59). The incrementally relaxing of the rule results in the price changing from \$4.59 to \$4.49. This is done in increments of 10 cents at a time. The rules are prioritized as claimed because the rules for figuring out prices look to various conditions and moves on to other conditions if prior conditions are not feasible (result in the price being higher than the competitor). The storage medium of claim 1 is disclosed in column 3, lines 29-32. The steps of storing initial prices are**

satisfied because at some point you must input some kind of price into the system. This is inherent. **Reuhl discloses code for designating a subset of products to optimize prices for. This is because the computer system (software) only optimizes prices for products that have had new sales data entered into the system.** So if sales data for televisions is updated in the system, the prices for batteries will not be changed. The examiner encourages applicant to read the entire patent to Reuhl, but also refers applicant to the following sections of particular relevance to the claimed invention. See column 6, lines 29-44; col. 7, lines 23-39; col. 8, lines 12-27, col. 10, lines 28-32; col. 11, and lines 26 to column 12, line 52.” (Emphasis added).

With regard to Claim 1, as the Examiner has stated “Reuhl discloses a method and system where sales and price data is entered into a computer system and the system then ‘optimizes’ the prices of numerous products based on the inputted sales data.” The Examiner suggests Reuhl as an example of optimizing product prices similar to the present art. Applicants respectfully traverse the rejection since Reuhl does not teach or suggest “optimizing prices for products in the subset of products, while maintaining the initial prices of all other products of the plurality of products, and wherein the optimizing of prices complies with the relaxed any infeasible rule of the plurality of rules” in the manner as recited by Claim 1. Support can be found in page 3, lines 5-14, and page 21, lines 7-12 of the Specifications as filed. Furthermore, applicants respectfully submit that Reuhl does not teach a method of optimization.

Instead, Reuhl appears to provide setting prices to a price lower than competitors’ prices, and ending in the digit 9. (Column 6, lines 31-35, Column 11, lines 34-43 and Column 12, lines 34-37). Reuhl’s system of price setting is single-faceted. The present invention is multi-faceted, and capable of providing an array of optimizations, including profit optimization, sales optimization or revenue optimization. See page 9, lines 9-19, page 10, lines 12-13, and page 15, line 17 of the Specification as filed. The method described in Reuhl does not appear to achieve this aim, but rather **“specifically, the price-changing function of the system is responsive to competitive price data on identical or substantially similar products.”** (Emphasis added). (Column 3, lines 58-61).

The teachings of Reuhl assume that competitive pricing results in larger sales and therefore increased profit, however this assumption is dramatically oversimplified and flawed since lower prices of all products does not necessarily increase sales volume, and further increased sale volume does not always result in increased profit. Additional factors, such as product interactions, stocking

costs, advertising and psychological effects often result in higher prices, of at least some products, providing a larger profit margin. Reuhl is thus not a method for optimization, and even if it were, Reuhl discloses a system that is far more limited in functionality compared with the present invention, and is thus not a method for the “optimization” in the manner recited by Claim 1.

Accordingly, the “the prices of numerous products based on the inputted sales data” of Reuhl, as referred to by the Examiner, appears to provide a system of primitive price comparison and reduction rather than a versatile optimization system with adjustable goals. As such, the method disclosed in Reuhl does not function as a sophisticated method of price optimization for a subset of products as recited in Claims 1, 14.

Additionally, with regard to Claim 1 and 14, as the Examiner has stated that “The rules are prioritized as claimed because the rules for figuring out prices look to various conditions and moves on to other conditions if prior conditions are not feasible (result in the price being higher than the competitor).” The Examiner suggests Reuhl as an example of prioritizing rules similar to the present art. The applicants again stress that Reuhl does not appear to teach a method of optimization. Therefore, the discussion of Reuhl’s relevance to prioritization as claimed is in a different context than price optimization. As such, it is respectfully submitted that Reuhl does not teach or suggest “prioritizing a plurality of rules” in the manner recited in Claims 1, 14. Support can be found in page 21, lines 14-16 of the Specifications as filed. As such, applicant respectfully traverses the rejection.

It appears that in Reuhl there exists a predetermined set of rules. (Column 11, lines 27-31). Additionally, in Reuhl, the “rules include looking for sales prices, advertised prices, etc., as well as applying a cent code to the resulting lowest price, and then checking to ensure that the new active price with the cent code is not greater than the competitor price,” as stated by the Examiner, and is a static and exhaustive rule set that is not alterable. As such the teachings of Reuhl appear to be static, with no change in rule order, and no capacity to change rule order. (See Figure 9, 10, Column 11, lines 48-67 and Column 12, lines 1-57).

The present invention allows for a dynamic prioritization of rules. Support can be found in page 21, lines 14-16 of the Specifications as filed. Additionally, the present invention allows for rule alteration and configuration. Support can be found in page 14, lines 17-22 of the Specifications as filed.

Accordingly, the “rules are prioritized” of Reuhl, as referred to by the Examiner, appears to provide a static system of unalterable steps rather than an active and dynamic prioritization of rules. (Column 11, lines 27-31). As such, the method disclosed in Reuhl appears to not function as a method of rule prioritization as recited in Claims 1, 14.

Regarding Claims 2, 15, the Examiner has stated that “the ‘N’ products are the number of products that the new sales data relates to. N can be the number of televisions that prices are being optimized for.” The Examiner suggests Reuhl as an example of designating a subset of products similar to the present art. The applicants again stress that Reuhl does not appear to teach a method of optimization. Therefore, the discussion of Reuhl’s relevance to product subset designation as claimed is in a different context than price optimization. As such, it is respectfully submitted that Reuhl does not teach or suggest “select[ing] no more than N products of the plurality of products to form the subset of products” in the manner recited in Claims 2, 15. Support can be found in page 26, lines 14-21, and page 27, lines 1-19 of the Specifications as filed. As such, applicant respectfully traverses the rejection.

In Reuhl the method described, as stated by the Examiner, “discloses code for designating a subset of products to optimize prices for. This is because the computer system (software) only optimizes prices for products that have had new sales data entered into the system.” Reuhl thus appears to create a “subset of products” that **new information is available for**. The present invention however is able to intelligently specify a subset not limited by the new data received but rather by **any number of goals**, such as profit maximization, allowing for greater flexibility and functionality over the method disclosed in Reuhl. Support can be found in page 27, lines 10-19 of the Specifications as filed.

Accordingly Reuhl appears to provide a ridged selection process of all products that have new data, rather than an intelligent and dynamic subset designation process of Applicants’ invention. As such, the method disclosed in Reuhl appears to not function as a method of rule prioritization as recited in Claim 2 and 15.

Regarding Claims 3, 16, the Examiner has stated that “Reuhl results in prices for items that are optimized for profit. **The intent of the price determination system and method is to make money**. Ensuring that your prices are not higher than competitor’s prices, you are optimizing prices to make a profit.” (Emphasis added). The Examiner suggests Reuhl as an example of optimizing

profit similar to the present art. It is respectfully submitted that Reuhl does not teach or suggest “providing an optimization of total profit for subset of products.” in the manner recited in Claims 3, 16. Support can be found in page 3, lines 5-14, and page 21, lines 7-12 of the Specifications as filed. As such, applicant respectfully traverses the rejection.

The method described in Reuhl appears to provide “specifically, the price-changing function of the system is responsive to competitive price data on identical or substantially similar products.” (Column 3, lines 58-61). As previously discussed, Reuhl assumes that competitive pricing results in larger sales and therefore increased profit, however this assumption is dramatically oversimplified and flawed since lower prices of all products does not necessarily increase sales volume, and further increased sale volume does not always result in increased profit. Additional factors, such as product interactions, stocking costs, advertising and psychological effects, often result in higher prices providing a larger profit margin. Despite the intent of Reuhl, at best, Reuhl appears to provide a “system . . . responsive to competitive price[ing]” that may, or may not, improve profit. (Column 3, lines 58-61, Column 6, lines 31-35, Column 11, lines 34-43 and Column 12, lines 34-37).

In conclusion, Reuhl appears to provide a system of price comparison and price reduction rather than optimizing profit. As such, the method disclosed in Reuhl appears to not function as a method of profit optimization as recited in Claims 3 and 16.

Dependent Claim 25 has been added to include “the optimization engine provides an optimization of total revenue for subset of products.” Support can be found in page 15, line 17 of the Specifications as filed.

Dependent Claim 26 has been added to include “the optimization engine provides an optimization of total sales volume for subset of products.” Support can be found in page 15, line 17 of the Specifications as filed.

Dependent Claim 27 has been added to include “providing, using the computer system, an optimization of total revenue for the subset of products.” Support can be found in page 15, line 17 of the Specifications as filed.

Dependent Claim 28 has been added to include “providing, using the computer system, an optimization of total sales volume for the subset of products.” Support can be found in page 15, line 17 of the Specifications as filed.

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In sum, Claims 1-6, 9-11, 14-19 remain in this application and are now believed to be allowable. Base Claim 1 has been amended and is now believed to be allowable. Dependent Claims 2-6, 9-11, 19 have been amended and are now believed to be allowable. Dependent Claims 25-28 have been added. Dependent Claims 2-6, 9-11, 15-19, 25-28 which depend therefrom are also believed to be allowable as being dependent from their respective patentable parent Claims 1, 14 for at least the same reasons. Hence, Examiner's rejection of dependent Claims 2-6, 9-11 are rendered moot in view of the amendment to base Claims 1. Applicants believe that all pending Claims 1-6, 9-11, 14-19, 25-28 are now allowable over the cited art and are also in allowable form and respectfully request a Notice of Allowance for this application from the Examiner. The commissioner is authorized to charge any fees that may be due to our Deposit Account No. 50-2766 (Order No. DEM1P009). Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at telephone number 925-570-8198.

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